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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,613	04/14/2004	William W. Wiles JR.	88664 00001	5086

20873 7590 10/19/2005

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EXAMINER

NGUYEN, HIEU P

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.P.

Office Action Summary	Application No. 10/823,613	Applicant(s) WILES ET AL.	
	Examiner Hieu Nguyen	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04/14/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, “a first voltage divider circuit coupled between said first amplifier output and said first amplifier non-inverting input” or “a photodiode coupled between said first amplifier non-inverting input and said inverting input” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Regarding claim 1, the specification fails to support the transimpedance amplifier having “a first voltage divider circuit coupled between said first amplifier output and said first amplifier non-inverting input” and “a second voltage divider circuit coupled between said first amplifier output and said second MOS resistor device source terminal”, in combination with the rest of the limitations of the claim(s).

Regarding claim 2, the specification fails to support the transimpedance amplifier having “a photodiode **coupled** between said first amplifier non-inverting input and said inverting input”, in combination with the rest of the limitations of the claim(s).

Remark

It **doesn't** appears that the specification and drawing(s) support the claim limitation(s) having the voltage divider coupled between amplifier output and amplifier non-inverting input (see claim 1) or having a photodiode coupled between said first amplifier non-inverting input and inverting input unless there are physical connections (see claim 2). According to specification and drawing(s), it **appears** that the voltage divider coupled between the amplifier output and ground (**note**: the non-inverting input connecting to a reference voltage (ground) and the voltage divider connecting to another reference voltage (ground) are not necessary sharing the same reference

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voltage) or a photodiode coupled between a inverting input and a **reference voltage** (ground).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hadley (U.S 5786730) discloses a transimpedance amplifier comprising: an amplifier (2), MOS resistor (8) and a voltage divider (potential divider defined by resistors 5 and 6), but lacks the second amplifier coupled to the gate terminal of MOS resistor device.

Yoon (U.S 6593810) discloses a transimpedance amplifier system comprising: a first gain stage (see detail of Fig 4) having a single input and an output, an NMOS resistor (15), a second amplifier (55) having an inverting input, a non-inverting input and an output being coupled to gate terminals of the NMOS resistor, a voltage divider (see Fig. 4, potential divider defined by resistors R1 and R2), but the first amplifier doesn't have two input terminals for inverting and non-inverting inputs.

This application is in condition for allowance except for the following formal matters: failing to provide proper antecedent basis for the claimed subject matter (see claims 1 and 2).

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Reasons for allowance

Claims 1 and 2 would be allowable if amended to overcome the objections above.

The following is an examiner's statement for reasons for allowance:

Claim 1 is allowed over the prior art because none of the prior art disclosed or suggested showing the particular structure recited in these claims namely:

Claims 1 call for, among others, a structure of a transimpedance amplifier comprising "a first amplifier having an inverting input, a non-inverting input and an output" and "a second amplifier having an inverting input, a non-inverting input and an output." In combination with the rest of the limitations of the claim(s).

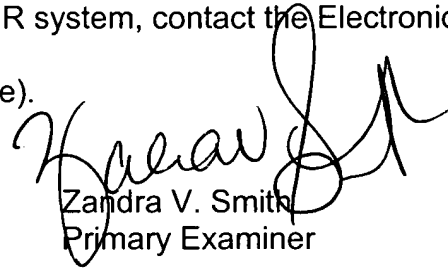
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu Nguyen whose telephone number is 571-272-0218. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hieu Nguyen
AU: 2817



Zandra V. Smith
Primary Examiner

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